In the claims:

Please amend claims 1-6 by adding the underlined materials:

SET I

1. (Currently amended) A method for treating whey, comprising the steps of:

   separating proteins from a whey stock solution; placing the protein-free solution as a medium in a reactor; placing mushroom mycelia in the medium; and aerobically culturing the mushroom mycelia in the reactor at 25~32°C and pH 3.8~4.6.

2. (Original) The method for treating whey according to claim 1, wherein the reactor is maintained at 28.3°C and pH 4.2.

3. (Original) The method for treating whey according to claim 1, wherein the mushroom is at least one species selected from the group consisting of Ganoderma lucidum, Lentinus edodes, Pleurotus ostreatus, Phellinus linteus and Agaricus bisporus.

4. (Currently amended) A method for culturing and cultivating mushroom mycelia, comprising the steps of:

   separating proteins from a whey stock solution; placing the protein-free solution as a medium in a reactor; placing the mushroom mycelia in the medium; and aerobically culturing the mushroom mycelia in the reactor at 25~32°C and pH 3.8~4.6.

5. (Original) The method for culturing and cultivating mushroom mycelia according to claim 4, wherein the reactor is maintained at 28.3°C and pH 4.2.

6. (Original) The method for culturing and cultivating mushroom mycelia according to claim 4, wherein the mushroom is at least one species selected from the group consisting of Ganoderma lucidum, Lentinus edodes, Pleurotus ostreatus, Phellinus linteus and Agaricus bisporus.

Please add new claims 7-20, as follows:

Set II

7. (New) A method for treating whey, comprising the steps of:

obtaining a whey stock solution;
adding an appropriate amount of an acid or base to precipitate the protein from the whey stock solution;
separating proteins from the whey stock solution to obtain a supernatant;
pasteurizing the supernatant;
placing the supernatant in a reactor;
selecting a appropriate mushroom mycelia with optimal growth rates in the supernatant;
placing the mushroom mycelia in the supernatant inside the reactor;
inoculating the supernatant; and
aerobically culturing the mushroom mycelia in the reactor at 25~32°C and pH 3.8~4.6 to remove more than 90% of the organic substances in the supernatant.

8. (New) The method of claim 7, wherein the reactor is maintained at 28.3°C and pH 4.2.

9. (New) The method for treating whey according to claim 7, wherein the mushroom is at least one species selected from the group consisting of Ganoderma lucidum, Lentinus

edodes, Pleurotus ostreatus, Phellinus linteus and Agaricus bisporus.

10. (New) A method for culturing and cultivating mushroom mycelia, comprising the steps of:

obtaining a whey stock solution;
adding an appropriate amount of an acid or base to precipitate the protein from the whey stock solution;
separating proteins from the whey stock solution to obtain a supernatant;
pasteurizing the supernatant;
placing the supernatant in a reactor;
selecting a mushroom mycelia with optimal growth rates in the supernatant;
placing the mushroom mycelia in the supernatant inside the reactor;
inoculating the supernatant; and
aerobically culturing the mushroom mycelia in the reactor at 25~32°C and pH 3.8~4.6 to remove more than 90% of the organic substances in supernatant.

11. (New) The method of claim 10, wherein the reactor is maintained at 28.3°C and pH 4.2.

12. (New) The method of claim 10, wherein the mushroom is at least one species selected from the group consisting of Ganoderma lucidum, Lentinus edodes, Pleurotus ostreatus, Phellinus linteus and Agaricus bisporus.

Set III

13. (New) The method of claim 1, wherein the separating step comprises:

obtaining a whey stock solution; and

adding an appropriate amount of an acid or base to precipitate the protein from the whey stock solution to obtain a protein-free solution.

14. (New) The method of claim 1, further comprising the step of inoculating the protein-free solution.

15. (New) The method of claim 1, wherein the reactor is maintained at 28.3°C and pH 4.2.

16. (New) The method of claim 1, wherein than 90% of organic substances in the protein-free solution is removed.

17. (New) The method of claim 4, wherein the separating step comprises:
Obtaining a whey stock solution; and

adding an appropriate amount of an acid or base to precipitate the protein from the whey stock solution to obtain a protein-free solution.

18. (New) The method of claim 4, further comprising the step of inoculating the protein-free solution.

19. (New) The method of claim 4, wherein the reactor is maintained at 28.3°C and pH 4.2.

20. (New) The method of claim 4, wherein than 90% of organic substances in the protein-free solution is removed.